

LISTING OF CLAIMS:

This listing of claims provided below will replace all prior versions and listings of claims in the application.

1. (Currently amended) A method for treating a host infected with a *togavirus* or a *coronavirus* or a ~~herpes virus~~, comprising administering an anti-viral effective amount of a compound, or a pharmaceutically acceptable salt or prodrug thereof, having a structure of Formula I:



wherein: R₁ is —NHC(O)Y, where Y is C₁-C₂₂ alkyl, C₂-C₂₂ alkenyl, or C₂-C₂₂ alkynyl;

R₂ is —OX, where X is C₁-C₂₂ alkyl, C₂-C₂₂ alkenyl, C₂-C₂₂ alkynyl; and

R₃ is phosphocholine;

optionally with a pharmaceutically acceptable carrier or diluent.

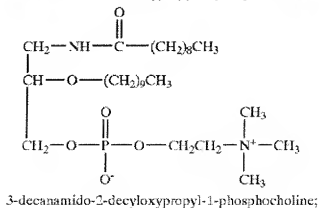
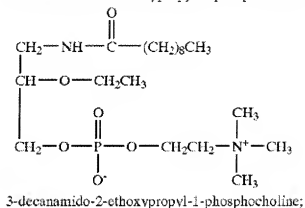
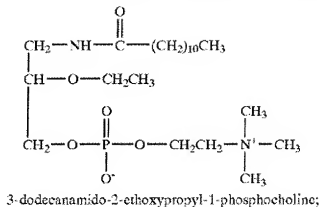
2. (Withdrawn) The method of claim 1, wherein
Y is C₁-C₁₄ alkyl, C₂-C₁₄ alkenyl, or C₂-C₁₄ alkynyl; and
X is C₁-C₁₄ alkyl, C₂-C₁₄ alkenyl, or C₂-C₁₄ alkynyl.

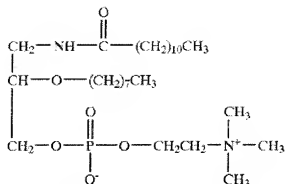
3. (Withdrawn) The method of claim 1 wherein:
Y is —C₁₁H₂₃, —C₁₀H₂₁ or —C₉H₁₉; and
X is —CH₂CH₃, —(CH₂)₂CH₃, —(CH₂)₃CH₃, or —CH₁₀CH₂₁.

4. (Withdrawn) The method of claim 1, wherein Y is —C₁₁H₂₃ and X is C₁-C₅ alkyl.

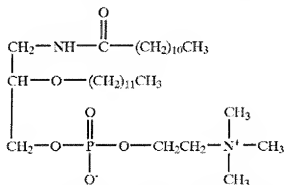
5. (Withdrawn) The method of claim 1, wherein Y is $\text{—C}_9\text{H}_{19}$ and X is $\text{C}_9\text{—C}_{11}$ alkyl.

6. (Withdrawn) The method of claim 1, wherein the compound is:

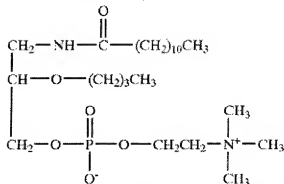




3-dodecanamido-2-octyloxypropyl-1-phosphocholine;



3-dodecanamido-2-dodecyloxy-1-phosphocholine; or



3-dodecanamido-2-butyloxypropyl-1-phosphocholine;

or a combination thereof.

7. (Previously presented) The method of claim 1, wherein the virus is a *coronavirus*.

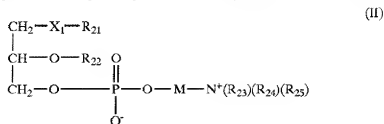
8. (Previously presented) The method of claim 7, wherein the *coronavirus* is SARS-CoV.

Claims 9-11. (Cancelled).

12. (Previously presented) The method of claim 1, wherein the host is a mammal.

13. (Previously presented) The method of claim 1, wherein the host is a human.

14. (Withdrawn) A method for treating a host infected with a *togavirus*, herpes virus or *coronavirus*, comprising administering an anti-viral effective amount of a compound, or a pharmaceutically acceptable salt or prodrug thereof, having a structure of Formula II:



wherein:

M is C₂-C₄ alkyl;

X₁ is —S—, —O—, —NH—, or —NHC(O)—;

R₂₁ is —C₁-C₂₀ straight chain alkyl, —C₂-C₂₀ straight chain alkylene containing not more than four double bonds, or aryl;

R₂₂ is —C₁-C₂₀ straight chain alkyl, —C₂-C₂₀ straight chain alkylene containing not more than four double bonds, or aryl; and

R₂₃, R₂₄, and R₂₅ are each independently either hydrogen, methyl, ethyl, propyl, or isopropyl;

optionally with a pharmaceutically acceptable carrier or diluent.

15. (Withdrawn) The method of claim 14 wherein:

M is —CH₂CH₂—;

X₁ is —S—, —O—, —NH—, or —NHC(O)—;

R₂₁ is C₁-C₁₆ straight chain alkyl, or —C₂-C₁₆ straight chain alkylene containing not more than one double bond;

R₂₂ is C₁-C₁₆ straight chain alkyl, or —C₂-C₁₆ straight chain alkylene containing not more than one double bond; and

R₂₃, R₂₄, and R₂₅ are each independently hydrogen or methyl.

16. (Withdrawn) The method of claim 14 wherein:

R₂₂ is C₁-C₅ straight chain alkyl, or —C₂-C₅ straight chain alkylene containing not more than one double bond.

17. (Withdrawn) The method of claim 15, wherein R₂₁ is —C₉-C₁₂ alkyl, and R₂₂ is —C₁-C₁₂ alkyl.

18. (Withdrawn) The method of claim 15, wherein R₂₁ is —C₉-C₁₂ alkyl, and R₂₂ is —C₁-C₅ alkyl.

19. (Withdrawn) The method of claim 15, wherein R₂₁ is —C₉-C₁₂ alkyl, and R₂₂ is —C₈-C₁₂ alkyl.

20. (Withdrawn) The method of claim 14, wherein the virus is a *coronavirus*.

21. (Withdrawn) The method of claim 20, wherein the *coronavirus* is SARS-CoV.

22. (Withdrawn) The method of claim 14, wherein the virus is a herpes virus.

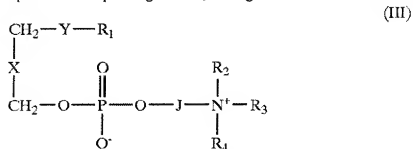
23. (Withdrawn) The method of claim 22, wherein the herpes virus is varicella zoster virus.

24. (Withdrawn) The method of claim 22, wherein the herpes virus is *cytomegalovirus*.

25. (Withdrawn) The method of claim 14, wherein the host is a mammal.

26. (Withdrawn) The method of claim 14, wherein the host is a human.

27. (Withdrawn) A method for treating a host infected with a *togavirus*, herpes virus or *coronavirus* comprising administering an anti-viral effective amount of a compound, or a pharmaceutically acceptable salt or prodrug thereof, having a structure of Formula III:



wherein:

Y is —S—, —O—, —NH—, —N(CH₃)—, —NHC(O)—, or —N(CH₃)C(O)—;

R₁ is C₁-C₁₈ alkyl, C₂-C₁₈ alkenyl, C₂-C₁₈ alkynyl or aryl;

X is a covalent bond or methylene that is optionally substituted with hydroxyl, C₁-C₂₀ alkyl, —O—(C₁-C₂₀ alkyl), —S—(C₁-C₂₀ alkyl), —(C(O)N(C₁-C₂₀ alkyl), C₂-C₂₀ alkenyl, —O—(C₂-C₂₀ alkenyl), —S—(C₂-C₂₀ alkenyl), —(C(O)N(C₂-C₂₀ alkenyl), C₂-C₂₀ alkynyl, —O—(C₂-C₂₀ alkynyl), —S—(C₂-C₂₀ alkynyl) or —(C(O)N(C₂-C₂₀ alkynyl);

J is C₁-C₄ alkyl optionally substituted one to three times with methyl or ethyl; and

R₂, R₃, and R⁴ are H or C₁-C₃ alkyl;

optionally with a pharmaceutically acceptable carrier or diluent.

28. (Withdrawn) The method of claim 27 wherein: Y is —NHC(O)—; R₁ is —C₆-C₁₈ alkyl; X is —CH—O—(C₁-C₁₈ alkyl) or —CH—O—(C₁-C₁₈ alkenyl); J is —CH₂CH₂—; and R₂, R₃, and R₄ are each methyl.

29. (Withdrawn) The method of claim 28, wherein X is —CH—O—(C₁-C₅ alkyl) or —CH—O—(C₂-C₅ alkenyl).

30. (Withdrawn) The method of claim 28, wherein R_1 is $-C_8-C_{12}$ alkyl and X is $-CH-O-(C_1-C_5 \text{ alkyl})$ or $-CH-O-(C_2-C_5 \text{ alkenyl})$.

31. (Withdrawn) The method of claim 28, wherein R_1 is $-C_8-C_{12}$ alkyl and X is $-CH-O-(C_8-C_{12} \text{ alkyl})$ or $-CH-O-(C_8-C_{12} \text{ alkenyl})$.

32. (Withdrawn) The method of claim 27, wherein the virus is a *coronavirus*.

33. (Withdrawn) The method of claim 32, wherein the *coronavirus* is SARS-CoV.

34. (Withdrawn) The method of claim 27, wherein the virus is a herpes virus.

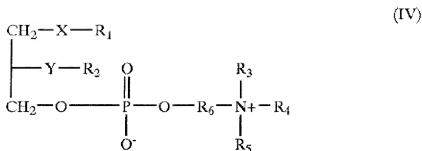
35. (Withdrawn) The method of claim 34, wherein the herpes virus is varicella zoster virus.

36. (Withdrawn) The method of claim 34, wherein the herpes virus is *cytomegalovirus*.

37. (Withdrawn) The method of claim 27, wherein the host is a mammal.

38. (Withdrawn) The method of claim 27, wherein the host is a human.

39. (Withdrawn) A method for treating a host infected with a *coronavirus*, herpes virus or *togavirus*, comprising administering an anti-viral effective amount of a compound, or a pharmaceutically acceptable salt or prodrug thereof, having a structure of Formula IV:



wherein:

R₁ is a C₆-C₁₈ alkyl, C₆-C₁₈ alkenyl, or C₆-C₁₈ alkynyl that is optionally substituted from 1 to 5 times with —OH, —COOH, oxo, amino, or aryl;

X is —NHC(O)—, —N(CH₃)C(O)—, —C(O)NH—, —C(O)N(CH₃)—, —S—, —S(O)—, —(SO₂)—, —O—, —NH—, and —N(CH₃)—;

R₂ is a C₁-C₁₄ alkyl, C₂-C₁₄ alkenyl, or C₂-C₁₄ alkynyl that is optionally substituted from 1 to 5 times with —OH, —COOH, oxo, amino, or aryl;

Y is —NHC(O)—, —N(CH₃)C(O)—, —C(O)NH—, —C(O)N(CH₃)—, —S—, —S(O)—, —(SO₂)—, —O—, —NH—, —N(CH₃)—, or —OC(O)—;

R₆ is a C₂-C₆ alkyl; C₂-C₆ alkenyl, or C₂-C₆ alkynyl; and

R₃, R₄, and R₅ are independently methyl or ethyl, or R₃ and R₄ together form an aliphatic or heterocyclic ring having five or six ring atoms and R₅ is methyl or ethyl; optionally with a pharmaceutically acceptable carrier or diluent.

40. (Withdrawn) The method of claim 39 wherein

R₂ is C₁-C₁₄ alkyl, C₂-C₁₄ alkenyl, or C₂-C₁₄ alkynyl;

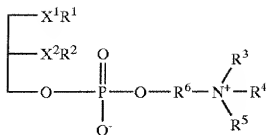
R⁶ is CH₂CH₂; and R₃, R₄, and R₅ are each independently CH₃.

41. (Withdrawn) The method of claim 40, wherein R₂ is —C₁-C₅ alkyl or —C₁-C₅ alkenyl.

42. (Withdrawn) The method of claim 40, wherein R₁ is —C₈-C₁₂ alkyl and R₂ is —C₈-C₁₂ alkyl.

43. (Withdrawn) The method of claim 40, wherein R_1 is $-C_8-C_{12}$ alkyl and R_2 is $-C_1-C_5$ alkyl.
44. (Withdrawn) The method of claim 40, wherein R^1 is $-C_8-C_{12}$ alkyl and R_2 is $-C_8-C_{12}$ alkyl.
45. (Withdrawn) The method of claim 39, wherein: X is $-NHC(O)-$, $-N(CH_3)C(O)-$, $-C(O)NH-$, or $-C(O)N(CH_3)-$; and Y is $-O-$, $-NH-$, or $-N(CH_3)-$.
46. (Withdrawn) The method of claim 39, wherein the virus is a *coronavirus*.
47. (Withdrawn) The method of claim 46, wherein the *coronavirus* is SARS-CoV.
48. (Withdrawn) The method of claim 39, wherein the virus is a herpes virus.
49. (Withdrawn) The method of claim 48, wherein the herpes virus is varicella zoster virus.
50. (Withdrawn) The method of claim 47, wherein the herpes virus is *cytomegalovirus*.
51. (Withdrawn) The method of claim 39, wherein the host is a mammal.
52. (Withdrawn) The method of claim 39, wherein the host is a human.
53. (Withdrawn) A method for treating a host infected with a *coronavirus*, herpes virus or *togavirus*, comprising administering an anti-viral effective amount of a compound, or a pharmaceutically acceptable salt or prodrug thereof, having a structure of Formula AA-1:

(AA-1)



wherein:

- X^1 is ---NHC(O)--- ;
 X^2 is ---O--- ;
 R^1 is $\text{---C}_1\text{---C}_{22}$ alkyl;
 R^2 is $\text{---C}_1\text{---C}_{22}$ alkyl;
 R^6 is $\text{---CH}_2\text{CH}_2\text{---}$; and
 R^3 , R^4 and R^5 are methyl.

54. (Withdrawn) The method of claim 53, wherein:

R^1 is ---CH_3 , $\text{---CH}_2\text{CH}_3$, $\text{---CH}_2\text{CH}_2\text{CH}_3$, $\text{---CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$, $\text{---CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$,
 $\text{---(CH}_2)_5\text{CH}_3$, $\text{---(CH}_2)_6\text{CH}_3$, $\text{---(CH}_2)_7\text{CH}_3$, $\text{---(CH}_2)_8\text{CH}_3$, $\text{---(CH}_2)_9\text{CH}_3$, $\text{---(CH}_2)_{10}\text{CH}_3$,
 $\text{---(CH}_2)_{11}\text{CH}_3$, $\text{---(CH}_2)_{12}\text{CH}_3$ or $\text{---(CH}_2)_{13}\text{CH}_3$; and R^2 is ---CH_3 , $\text{---CH}_2\text{CH}_3$,
 $\text{---CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$, $\text{---CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$, $\text{---(CH}_2)_5\text{CH}_3$, $\text{---(CH}_2)_6\text{CH}_3$, $\text{---(CH}_2)_7\text{CH}_3$,
 $\text{---(CH}_2)_8\text{CH}_3$, $\text{---(CH}_2)_9\text{CH}_3$, $\text{---(CH}_2)_{10}\text{CH}_3$, $\text{---(CH}_2)_{11}\text{CH}_3$, $\text{---(CH}_2)_{12}\text{CH}_3$ or $\text{---(CH}_2)_{13}\text{CH}_3$.

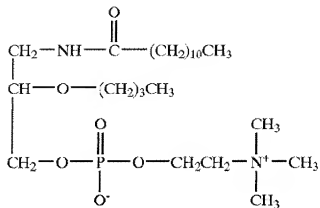
55. (Withdrawn) The method of claim 53, wherein the host is infected with a *coronavirus*.

56. (Withdrawn) The method of claim 55, wherein the *coronavirus* is SARS-CoV.

57. (Withdrawn) The method of claim 56, wherein:

R^1 is $\text{---(CH}_2)_9\text{CH}_3$, $\text{---(CH}_2)_{10}\text{CH}_3$, or $\text{---(CH}_2)_{11}\text{CH}_3$; and
 R^2 is $\text{---CH}_2\text{CH}_2\text{CH}_3$, $\text{---CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$, or $\text{---CH}_2(\text{CH}_2)_3\text{CH}_3$.

58. (Withdrawn) The method of claim 56, wherein the compound is:

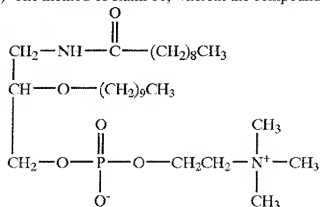


59. (Withdrawn) The method of claim 53, wherein the host is infected with a herpes virus.

60. (Withdrawn) The method of claim 59, wherein the herpes virus is varicella zoster virus.

61. (Withdrawn) The method of claim 60, wherein: R¹ is —(CH₂)₇CH₃-, —(CH₂)₈CH₃, or —(CH₂)₉CH₃; R² is —(CH₂)₉CH₃-, —(CH₂)₁₀CH₃, or —(CH₂)₁₁CH₃;

62. (Withdrawn) The method of claim 60, wherein the compound is:



63. (Withdrawn) The method of claim 59, wherein the herpes virus is cytomegalovirus.

64. (Withdrawn) The method of claim 1, wherein the virus is a *togavirus*.
65. (Previously presented) The method of claim 1, wherein the compound is administered orally, by inhalation, intravenously, parenterally, intradermally, subcutaneously or topically.